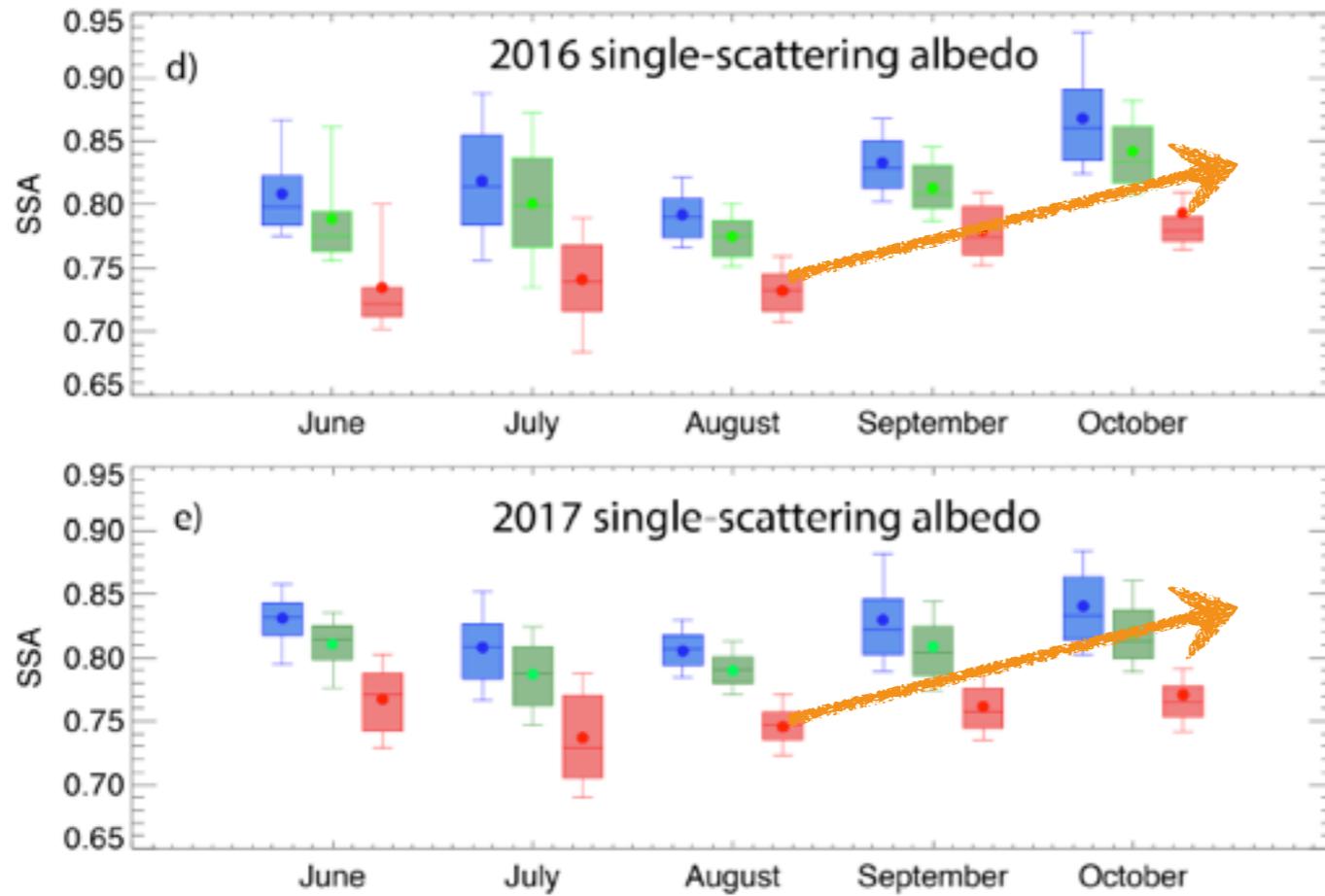


Status of LASIC single-scattering-albedo measurements

Connor Flynn, Art Sedlacek, Tim Onasch, Andrew Freedman, Allison Aiken, Paquita Zuidema



filter-based PSAP/nep estimates show Aug-Oct increases in mean SSA

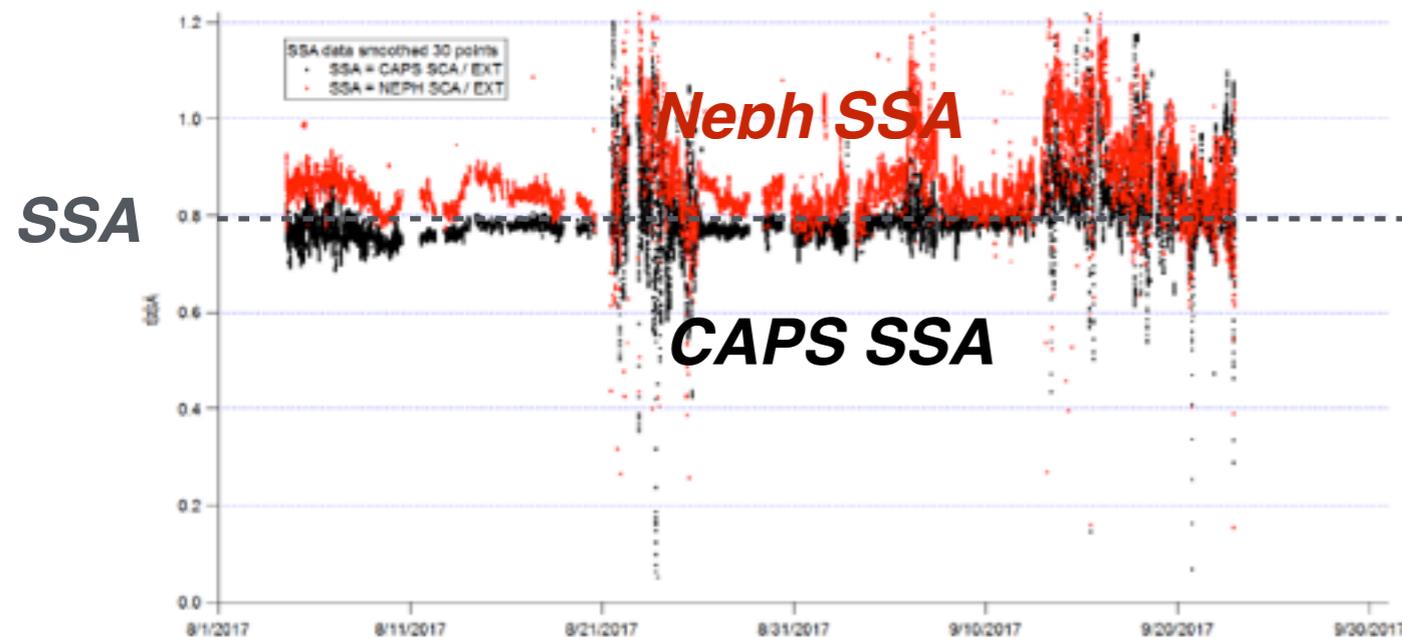
August: 0.78 ± 0.02

September: 0.81 ± 0.03

October: 0.83 ± 0.03

2016/2017 means, 529 nm (green)

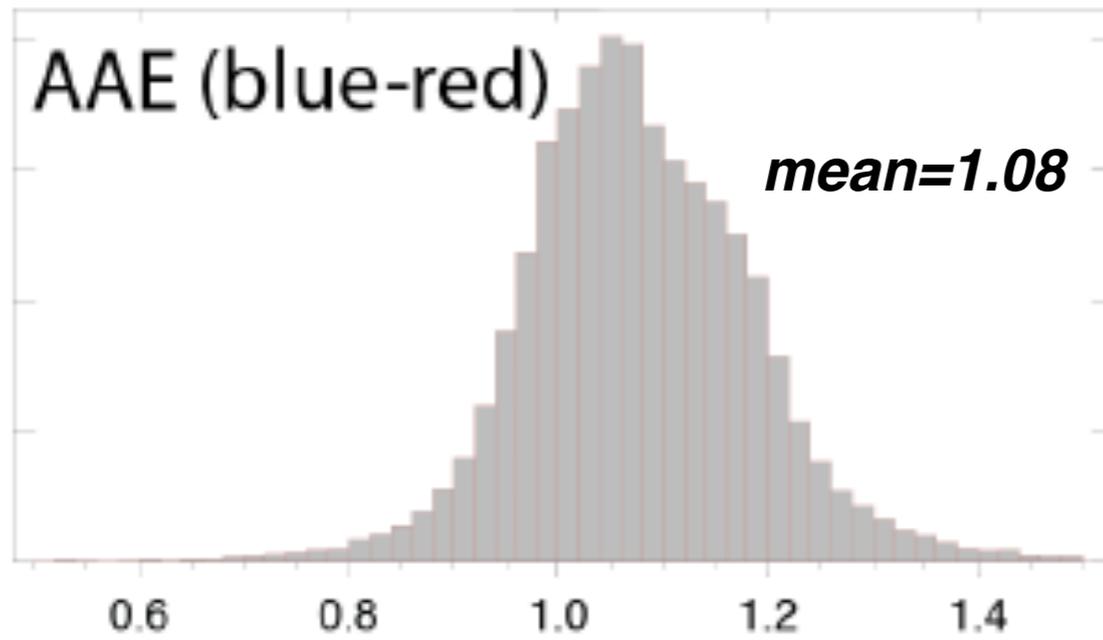
Aerodyne (Tim Onasch/Andrew Freedman) independently assessed SSA (530 nm) using a CAPS-SSA, 4 Aug - 22 Sep 2017



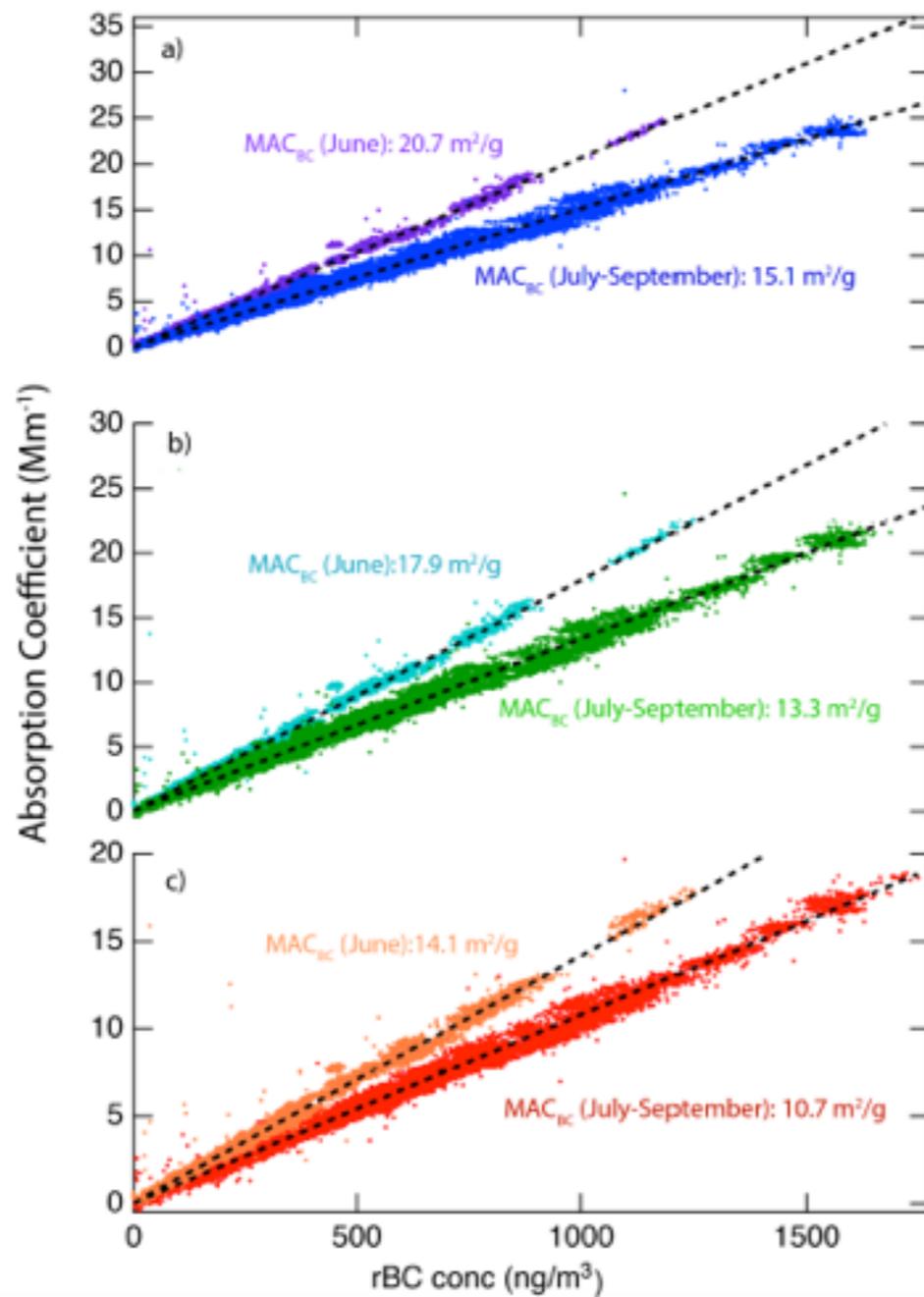
CAPS SSA 0.77 ± 0.03

neph SSA 0.83 ± 0.08

absorption angstrom exponents
are spectrally-flat



filter light absorption as a function
of black carbon mass conc.
suggest 2x enhancement
from black carbon alone



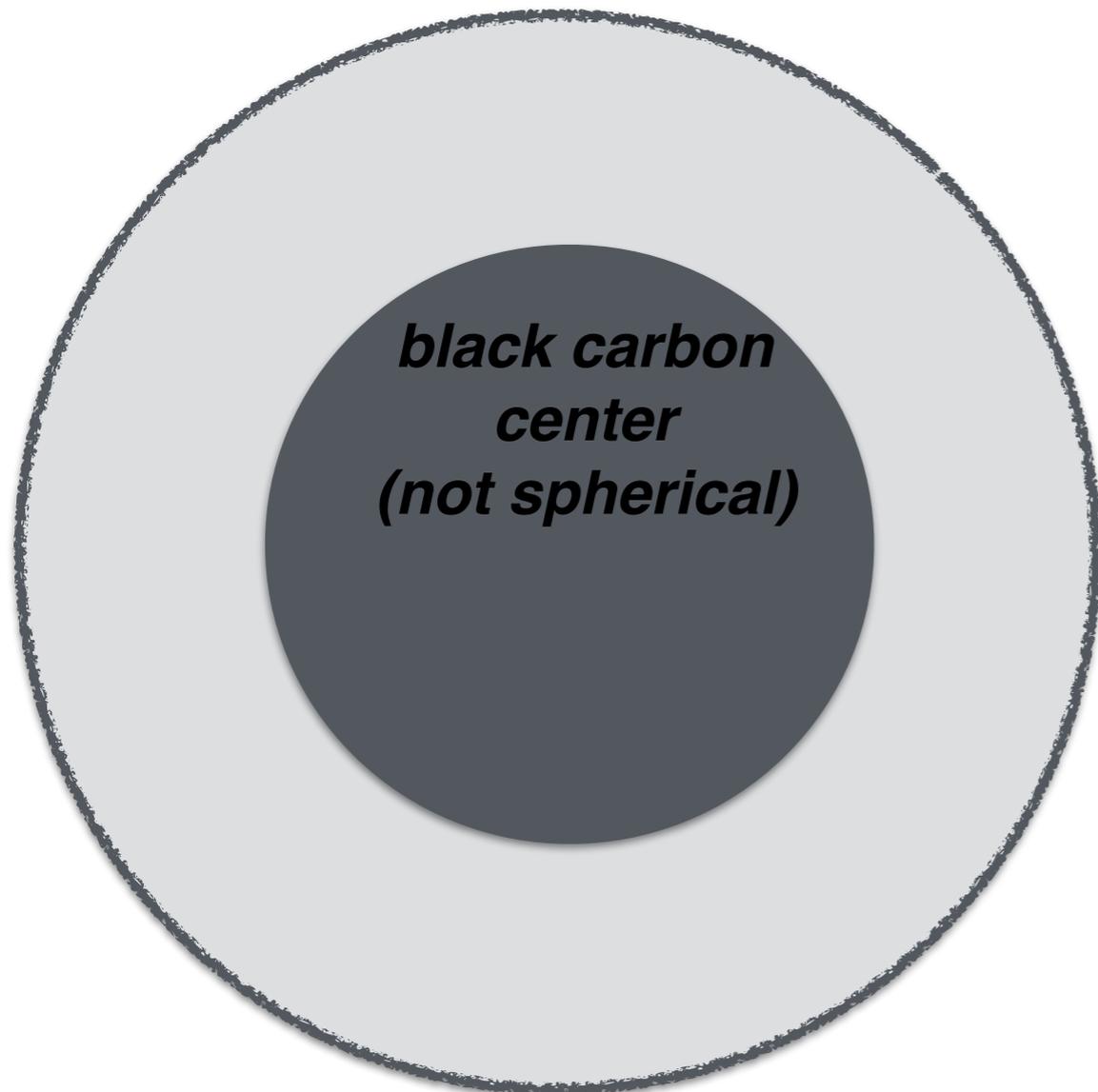
~ 15 m²/g vs 7-8 m²/g from lab
studies of black carbon

....with slightly higher
values in June

what we think is going on:

the dominant absorption

*~spectrally-flat coating enhancing
absorption through
lensing/Mie effect
(e.g. Lack et al. 2009)*



*modulated by changing
composition of accompanying
aerosols (e.g., brown carbon)*

